Designing
Environments

for Children &
Adults with ASD

About GA Architects

- Designers of environments for ASD
- New build and refurbishments
- Residential, educational and respite
- CDA to London Borough of Hackney
- Advisor to school in Svendborg Denmark
- Member of Sensory Star Advisory Board of America
- Member of British Standards Institute Neuro-diversity Working Group
- Collaborator with University of Kingston research project on colour palette for Autism
- Associated with Sapienza University of Rome
- Regular speakers at conferences
- Organisers of twice yearly seminars on ASD

The Method

85 colours selected by the Design Research Centre

GAA selected 23 colours as ASD friendly

School teachers and carers' opinion on preferred colours

20 colours presented to children with ASD between 15-19 years old

Selection through elimination process

Summarise the results

Basic Principles

- Low arousal colours

√

- Single colour

√

- Organic and non-toxic and low odour paints

√

NON TOXIC

- Patterns should be avoided

✗

- Soft furnishings should also be kept fairly plain

√

- Patterned floors can be confusing and may increase anxiety

✗

GAA Colour Palette Selection

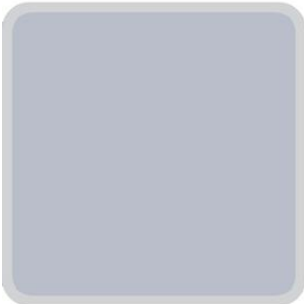|					
3010 R	0505 R30B	3010 R40B	1020 B10G	2020 B10G	1010 B30G
3020 R40B	1020 R90B	2020 R90B	3020 B50G	0505 G	3010 G
0502 B	1020 B	1010 B10G	3020 G	2010 G50Y	0505 G60Y
1005 Y40R	2020 Y50R	0505 Y60R	BS 00 A 01 PORTLAND	BS 10 B 15 GARDENIA	

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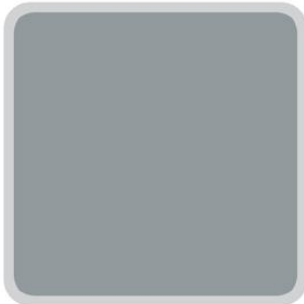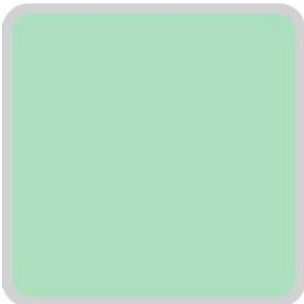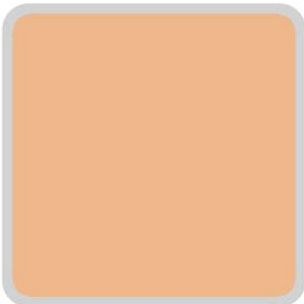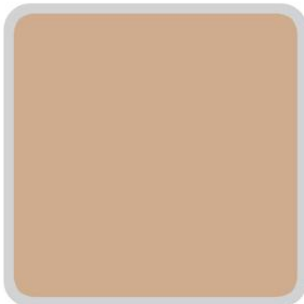# Colours used on various projects visited

0510 R

5502 R
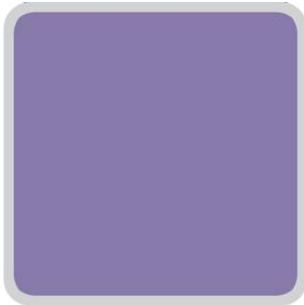
3040 R60B

2010 R70B
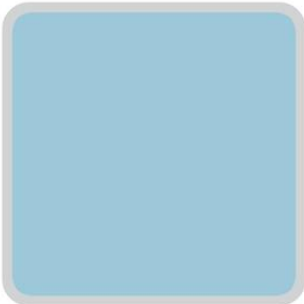
1030 B

4005 B20G

0530 G

1030 Y40R

2020 Y40R

Colour palette presented to children

|		
3030 B10G	1020 B50G	3020 B50G
2010 R	3020 R	1020 R40B
1020 G	3020 G	2010 G50Y
3020 R40B	1020 R90B	3020 R90B
3020 G50Y	1020 Y20R	2030 Y20R
1020 B	3030 B	1020 B10G
1020 Y50R	3020 Y50R	

ASD friendly palette chosen by children

- Subdued and colours mixed with grey were favoured by the children with autism
- A predominant preference for colours in the Blue/Green hue sectors was notable
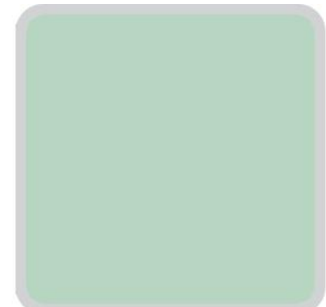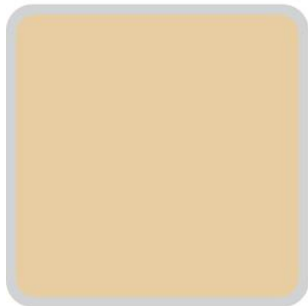- A balance between colourfulness and greyness is seen to be popular.
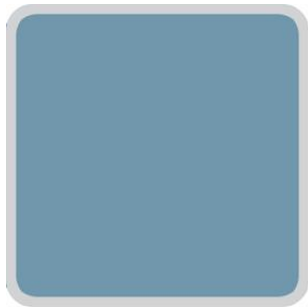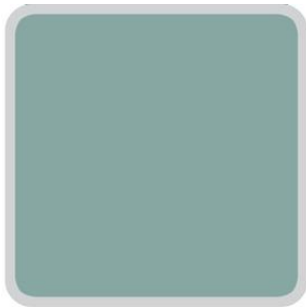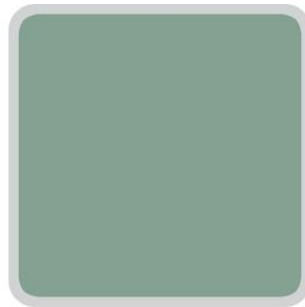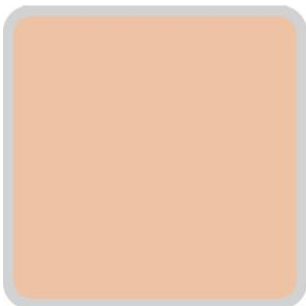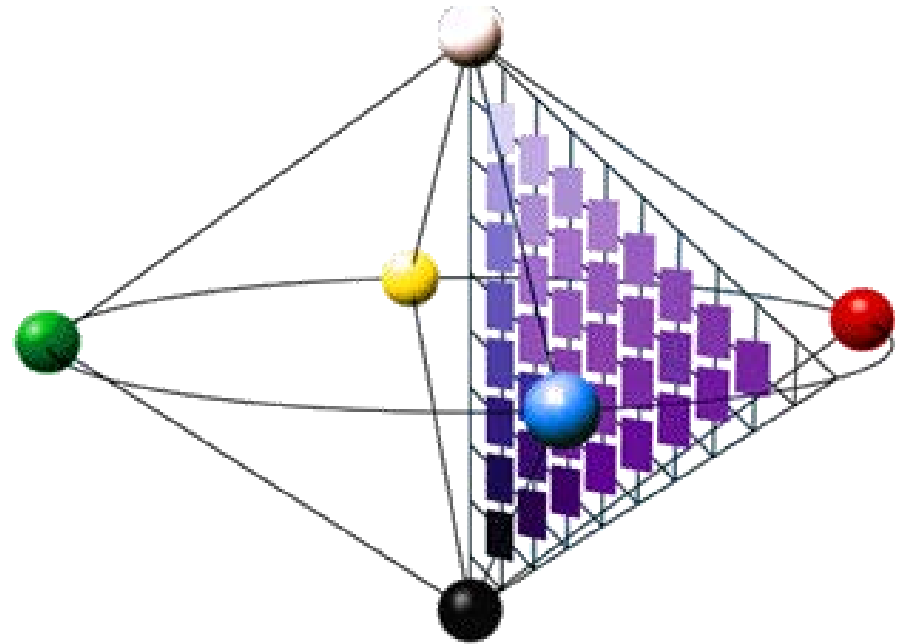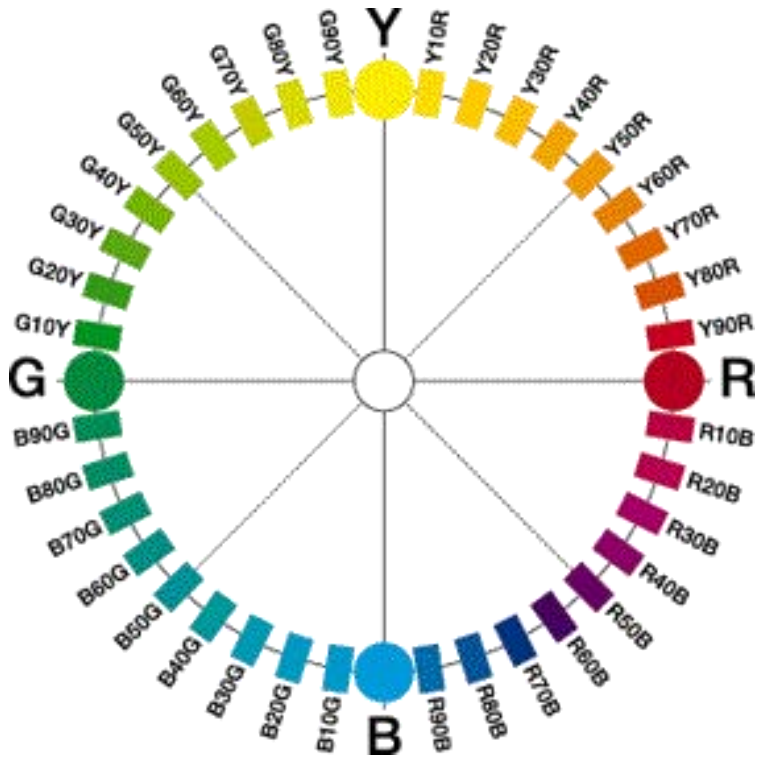
3030 B   3020 B50G   3020 G   3030 B10G   1020 G

1020 Y20R   1020 Y50R   3020 R40B   3020 G50Y

The Natural Colour System

3020 R40B

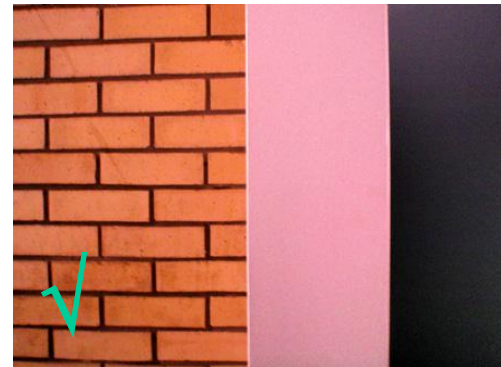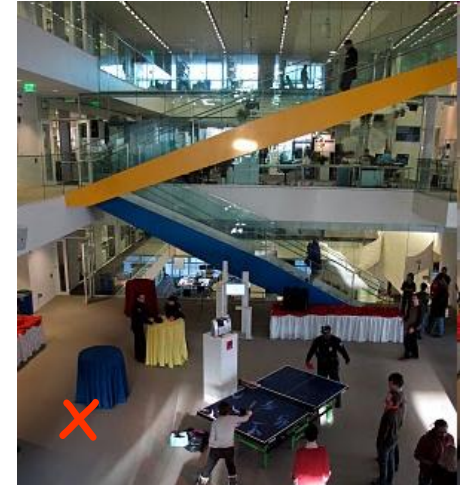| 3020	R40B
30%Black	60% Red
20%Chromaticness	40%Blue
50% White	

Proxemics

Definition: How much space is needed around an individual to feel comfortable

Basic Principles:

- Too little space may result in feelings of discomfort and possibly claustrophobia

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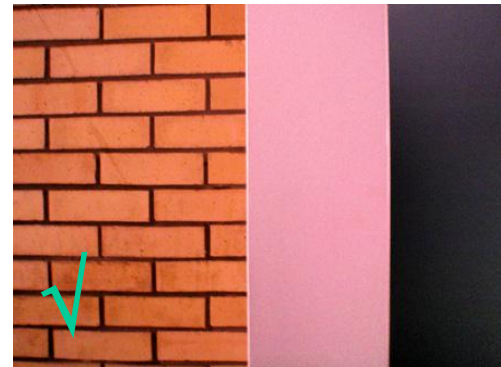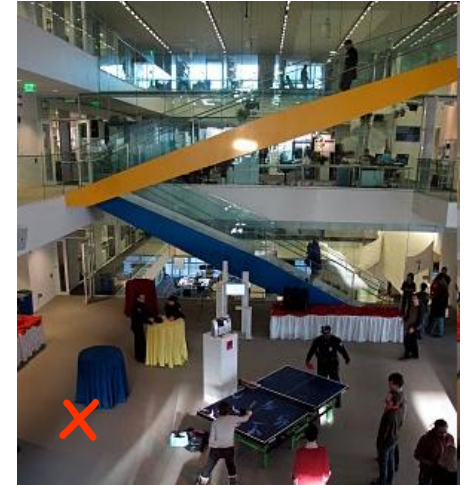
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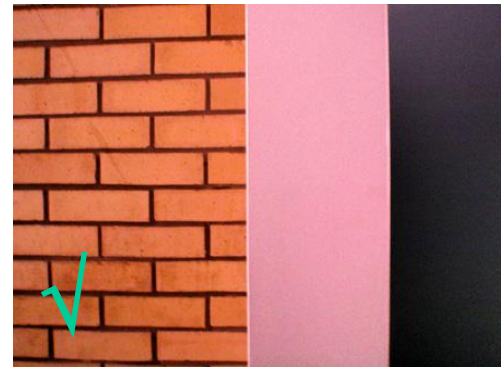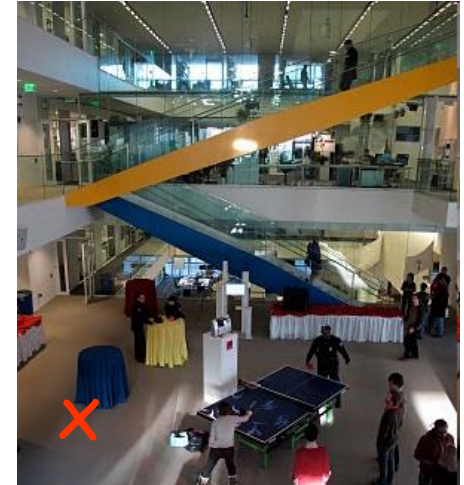
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- Lighting and shade helps the relationship between the space and the individual
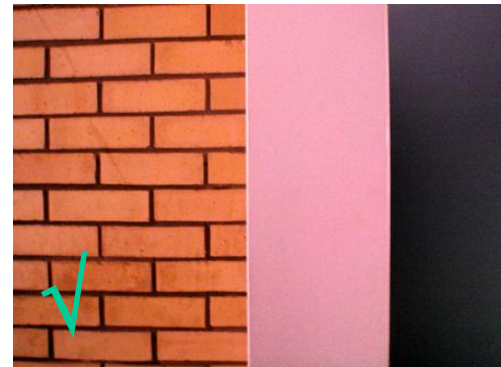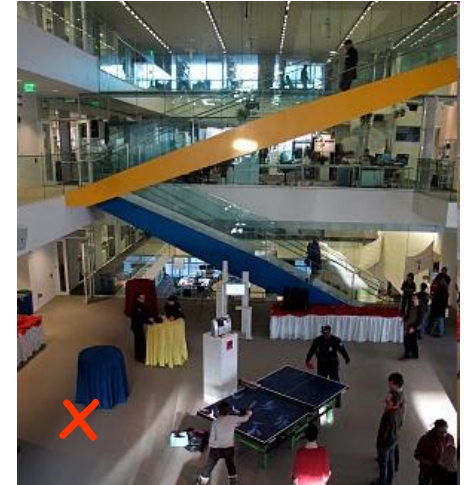
Colour coding

• Review preferred colour   palette
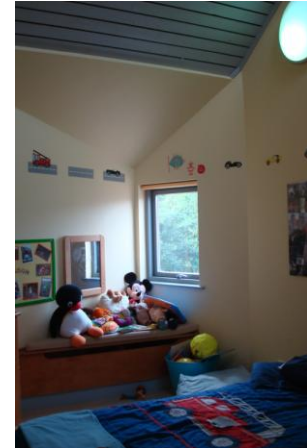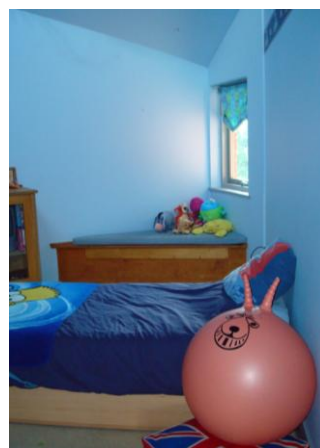
Colour coding

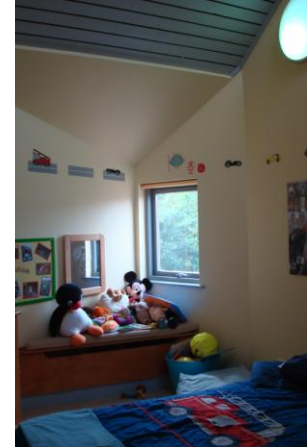- Review preferred colour palette

- No stimulating colours
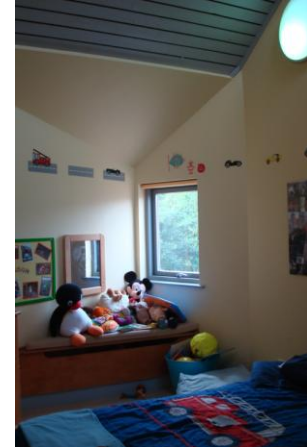
Colour coding

- Review preferred colour palette

- No stimulating colours

- Consider colours in daylight and artificial lighting conditions

Lighting

• Lighting and room layout influence the   perception of colours

Lighting

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- No flickering fluorescent lighting

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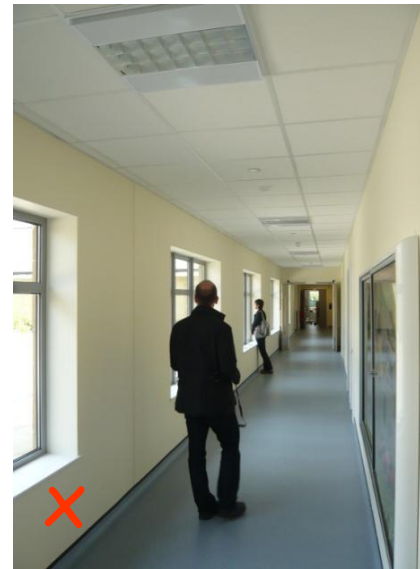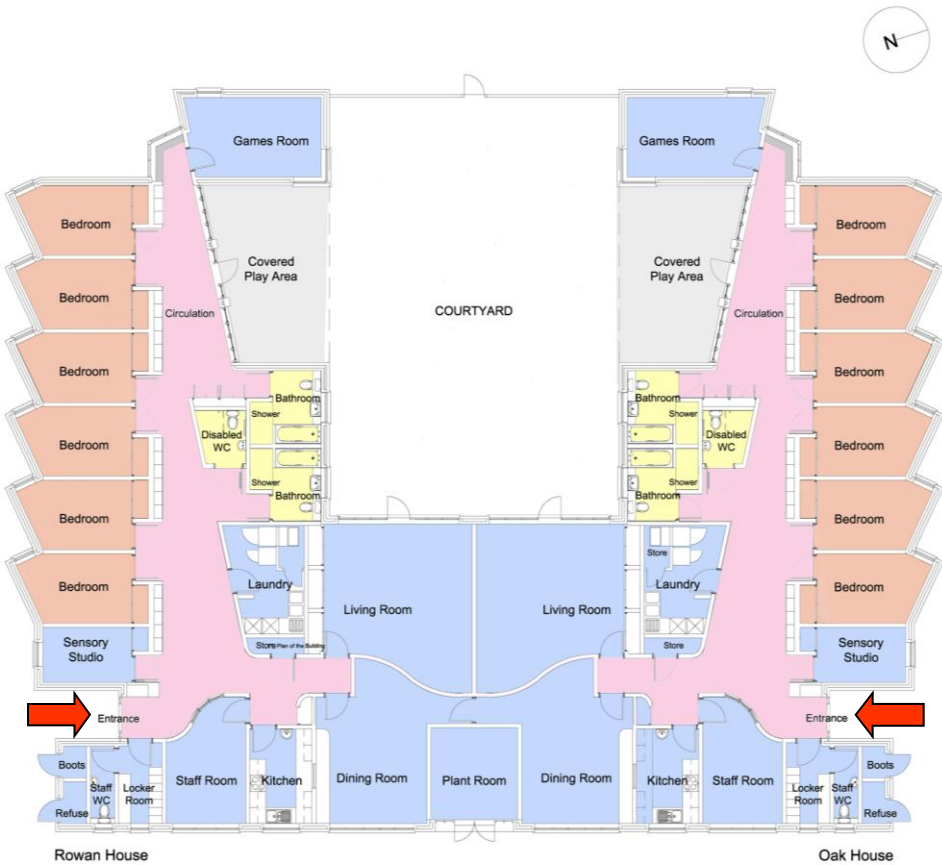
- Incorporate dimming facilities

Lighting

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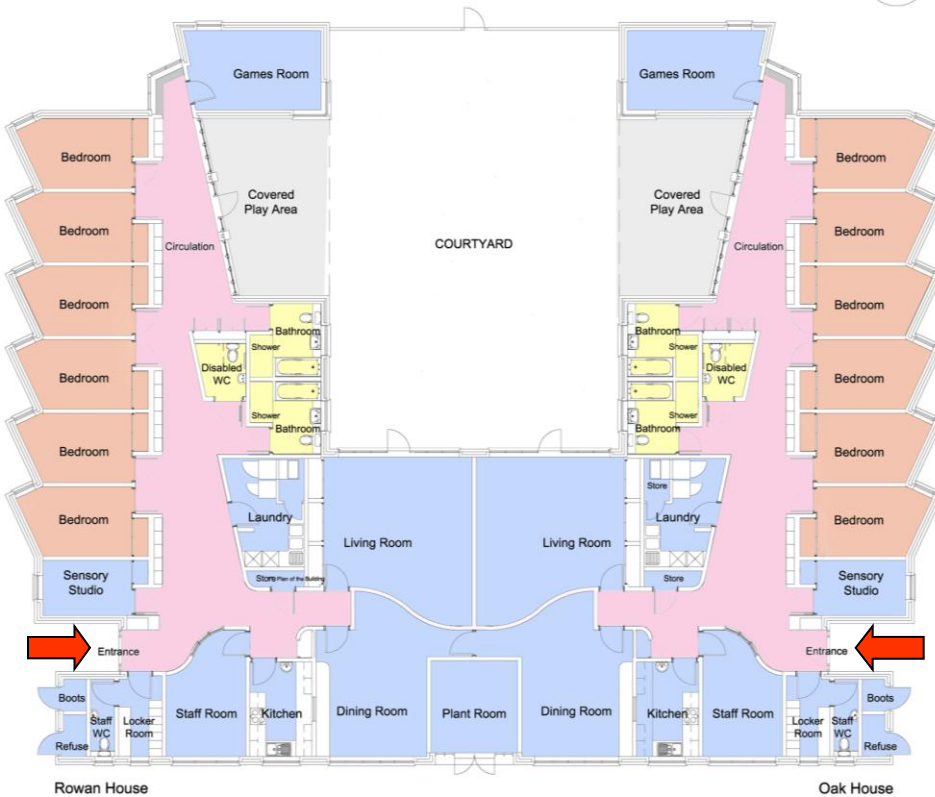
- Consider coloured lighting for scene setting

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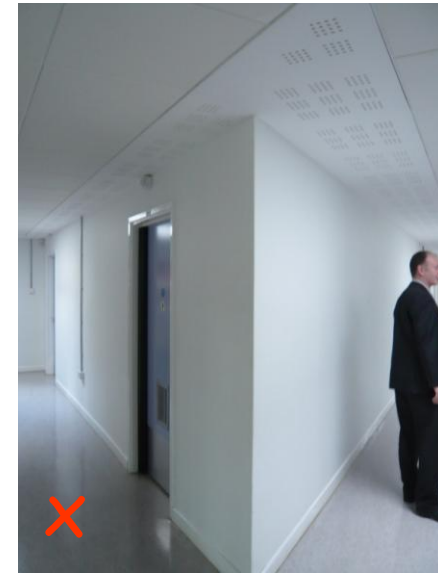
Way finding

- Clear geography

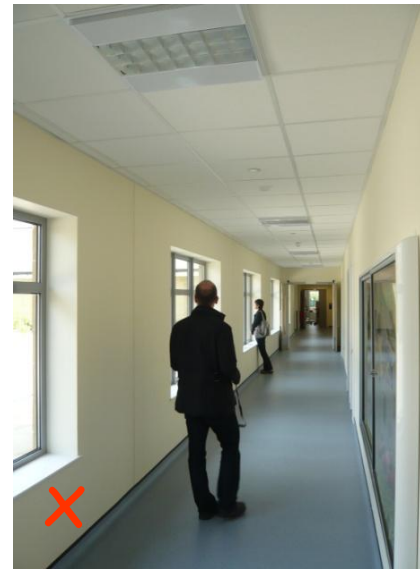Rowan House

Oak House

Way finding

- Clear geography
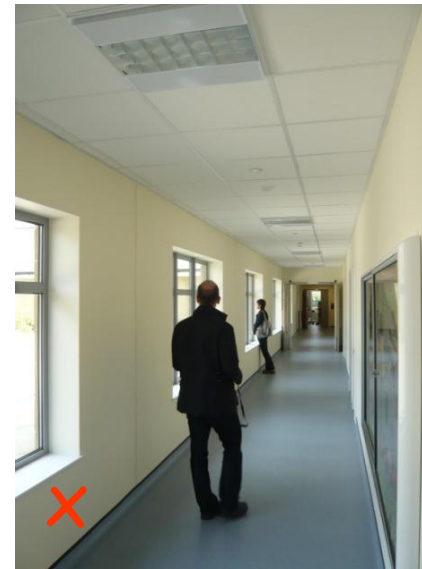
- Curved walls

Way finding

- Clear geography

- Curved walls

- Using colours to distinguish walls, floors and furniture makes it easier to navigate
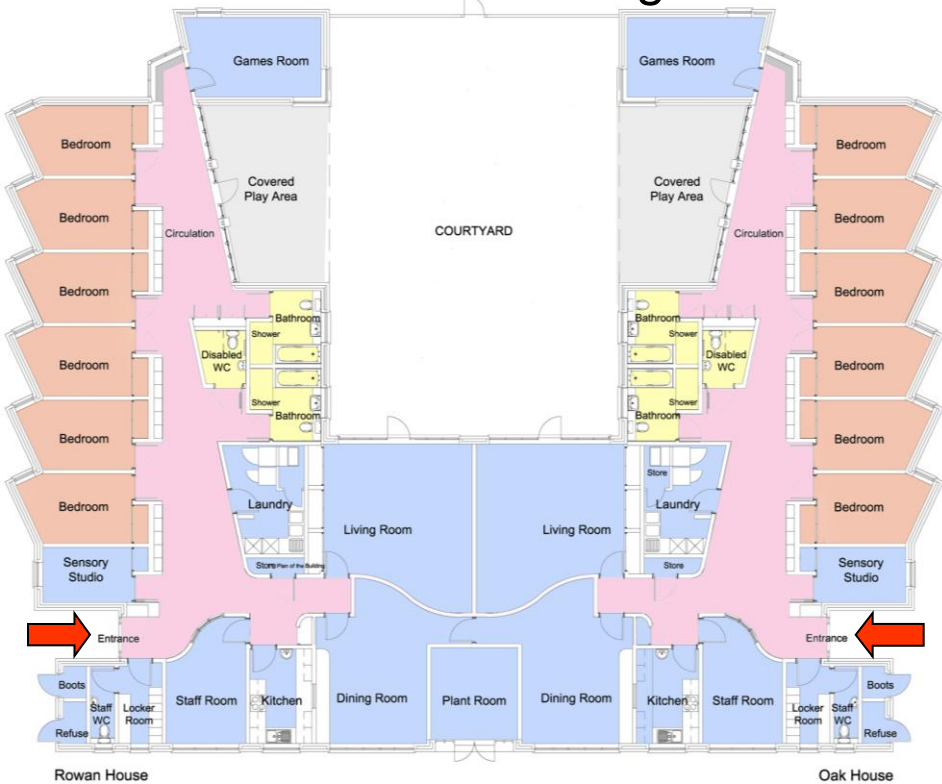
Circulation

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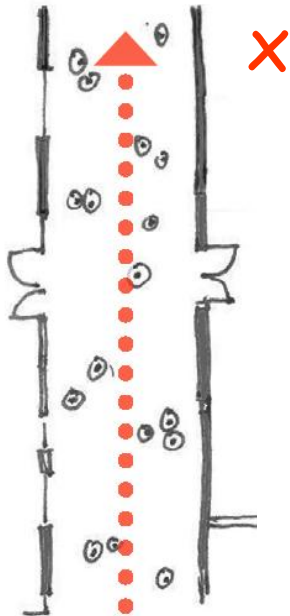
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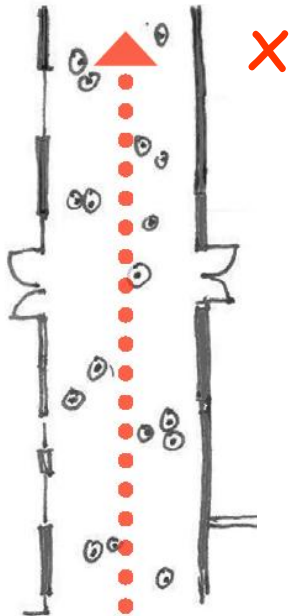
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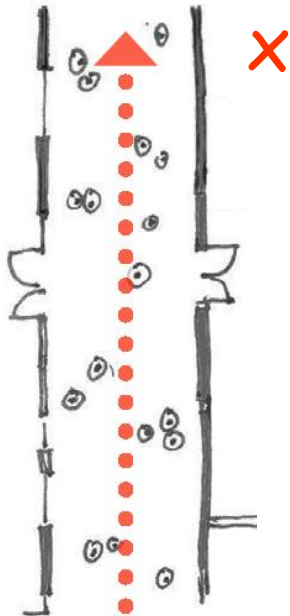
- Eliminate running opportunities

- Spaces for socialising and being alone

- Point of interest, recognisable spaces

Calm and simple spaces

- No stimulating colours
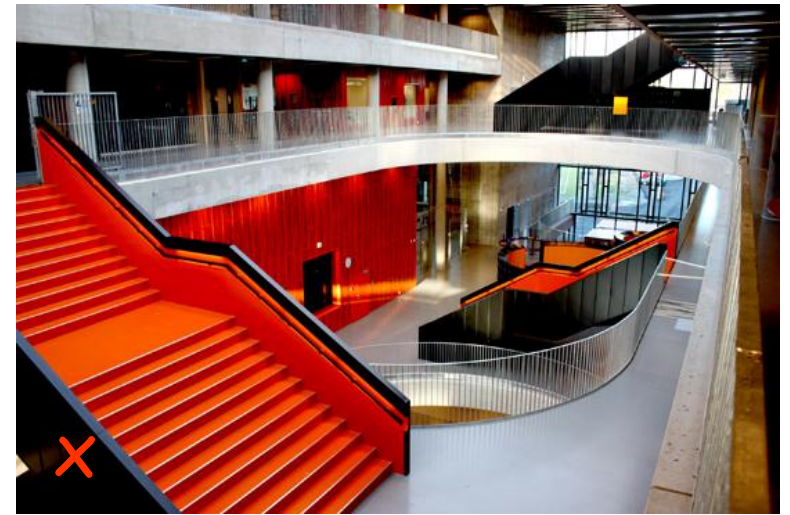
Calm and simple spaces

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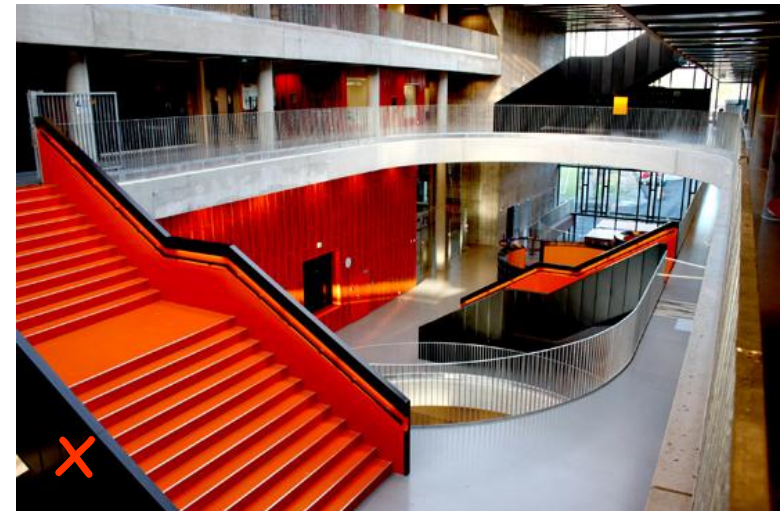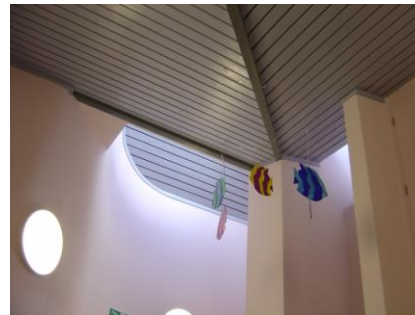
- Good acoustics

Calm and simple spaces

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- Good acoustics

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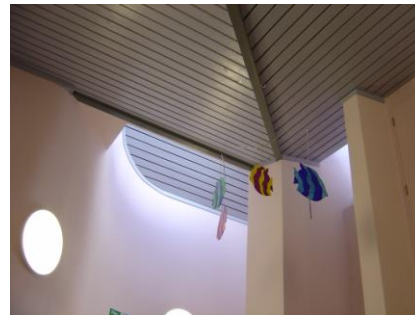
Bedrooms

- Soft colours to the ceiling
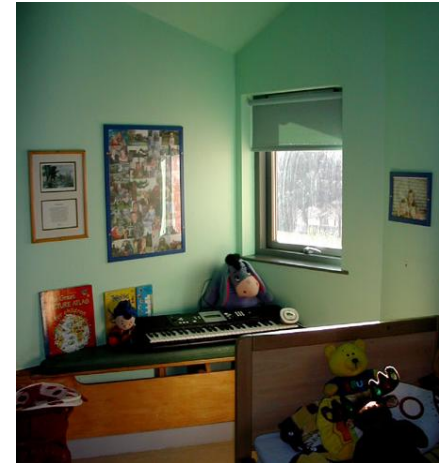
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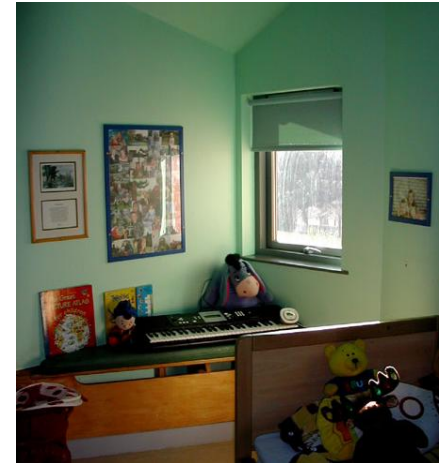
- Screening and filtering the sunlight

Bedrooms

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- Flexibility to choose colours from a selected palette
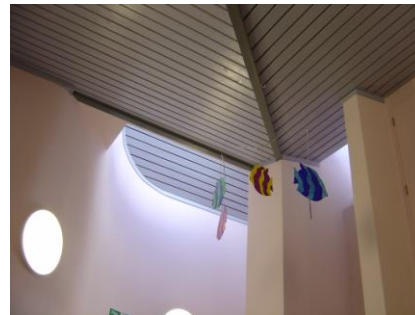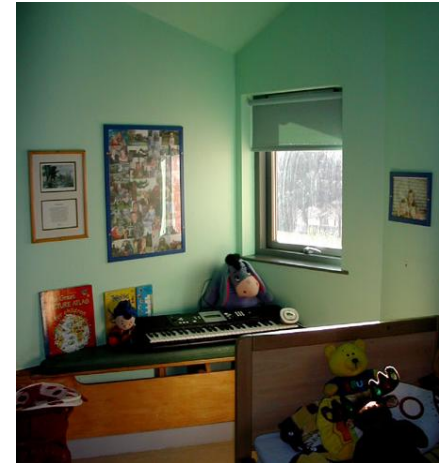
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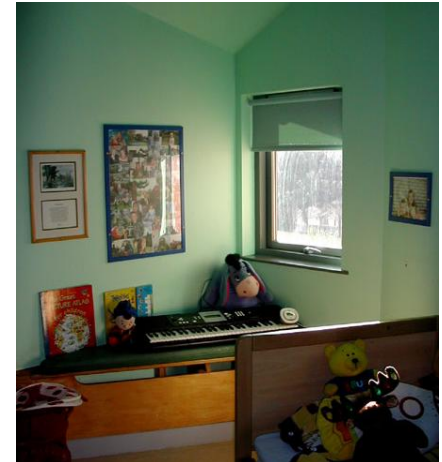
Bedrooms

- Soft colours to the ceiling

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- Natural ventilation through high level windows
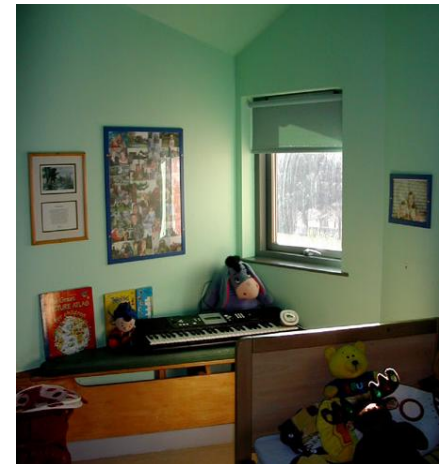
Classrooms

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- Filtered light to avoid distraction and glare

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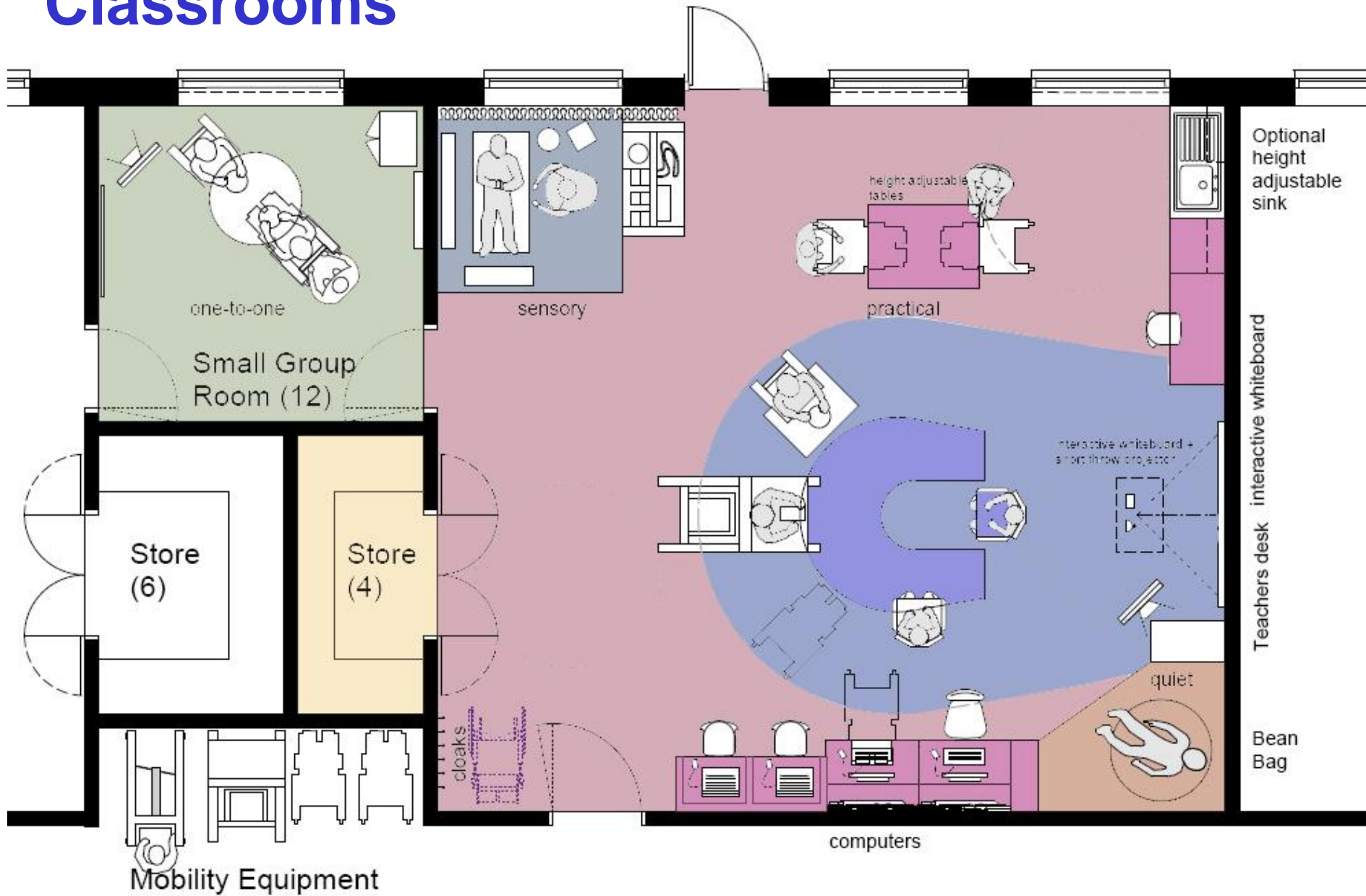
- Subdivision of areas / quiet areas

- Dedicated external areas

Classrooms

Small Group Room (12)

one-to-one

Store (6)

Store (4)

Mobility Equipment

sensory

practical

height adjustable tables

Optional height adjustable sink

interactive whiteboard + short throw projector

interactive whiteboard

Teachers desk

cloaks

quiet

Bean Bag

computers

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Conclusions

- Balance between grey and colour treatments

- Predominance of blue and green

- Lighting and shape of room can affect the colour perception

- Avoidance of stimulating colours

- Consider:
  - Proxemics

    - Way finding and circulation areas

    - Calming spaces

Designing Environments for Children and Adults with *ASD*

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